

Remarks

The non-final Office Action of October 2, 2009, has been carefully reviewed and these remarks are responsive thereto. Upon entry of the present paper, claims 1-16, 18-23, 39-45, 47-58, and 61-62 are pending. Claims 17, 24-38, 46, and 59-60 have been cancelled without prejudice or disclaimer. Claims 1, 18, 39, 47, 53, and 61-62 have been amended without adding any new matter. Support for the amendments may be found, for example, on pages 7-8 of the Specification as originally filed. The Examiner is respectfully requested to call the undersigned by phone if it is felt that this response does not place the Application in condition for allowance.

Rejections under 35 U.S.C. § 102

Claims 1-6, 12-14, 39, 41-50, 52-56 and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by Chapman (US Patent No. 7324515), hereinafter referred to as Chapman.

Independent claim 1 has been amended to recite, among other things:

wherein the CMTS outputs a downstream channel descriptor (DCD) with a tunnel type, network address, and tunnel type identifier for associating the different types of data tunnels with network addresses and wherein two different tunnels of the same tunnel type have different tunnel type identifiers

Chapman does not disclose or suggest at least this feature of amended claim 1. A modified version of this feature of claim 1 was part of previous dependent claim 17 (now cancelled). The Office Action on page 12 rejected previous dependent claim 17 as unpatentable over Chapman in view of US Patent 7349430 (Chapman B). Further, on page 12, Office Action states:

As per claim 17 ‘Chapman a’ doesn’t teach but ‘Chapman b’ teach the CMTS of claim 1 wherein the CMTS outputs a downstream channel descriptor (DCD) for associating the different types of data tunnels with network address (Column 9, line 61-65, Each channel is identified by a downstream channel descriptor for downstream message from CMTS to CM.) Therefore it would have been obvious to one of ordinary skill in the art at the time of invention, to modify the system of Chapman by CMTS outputs a downstream channel descriptor (DCD) for associating the different types of data tunnels with network address shown by combination of Chapman. This modification would benefit the system of

Chapman by having downstream channel descriptor for a different tunnels.

Chapman B relates to “an improved addressing scheme … for use in access networks.” (See Abstract of Chapman B). While Chapman B does describe the use of “a downstream channel descriptor 575 in combination with the domain ID 572 associated with that particular downstream channel,” (See Chapman B, column 9, ll. 63-64) the downstream descriptor of Chapman B does not disclose or suggest “a tunnel type, network address, and tunnel type identifier for associating the different types of data tunnels with network addresses and wherein two different tunnels of the same tunnel type have different tunnel type identifiers,” as claimed. Page 7 of the specification describes these fields. (“The tunnel type column 182 identifies the tunnel types of the tunnels identified in the DCD message 180. The network address 184 associated with the tunnel types 182 are shown in the network address column 184. Tunnel identifiers 186 associated with the network address 184 are shown in the tunnel identifier column 186.” Page 7 of the Specification, ll. 22-26.) Figures 5A-C of Chapman B detail different downstream channel addressing schemes used therein. While these embodiments show a slot ID, port ID, downstream channel ID, and domain ID, none of these fields disclose or suggest a network address of a tunnel type, a tunnel type, and a tunnel type identifier, as claimed. The slot ID refers to a slot in the CMTS occupied by a specific line card (e.g., an electronic circuit with downstream and upstream channel interfaces such as that shown in 310, 320, 330, and 340 of Figure 3 of Chapman B). The port ID corresponds to a port on the line card corresponding to that particular slot (e.g., an upstream or downstream channel transmitter/receiver interface such as that for channels D1, U1, U2, etc. in Figure 3 of Chapman B). (See also Chapman B, column 7, ll. 16-18.) The downstream channel ID and domain ID are used to uniquely identify the channel. The domain ID identifies a grouping of line cards (See Chapman B, column 2, ll. 63-64) and hence is not a tunnel type. Finally, the downstream channel ID identifies a downstream channel associated with a particular service ID (SID). (See Chapman B, column 14, ll. 49-51.) A service ID is “used to identify flows associated with particular cable modem in a particular DOCSIS domain.” (See Chapman B, column 4, ll. 44-46.) Examples of service flows include data, VoIP, and video. (See Chapman B, column 4, line 52.) Data, VoIP, and video represent different ways in which the same information is communicated to a customer; they are not equivalent to “different types of data tunnels with network addresses and wherein two different tunnels of the

same tunnel type have different tunnel type identifiers,” as claimed (emphasis added).

None of the cited references (e.g. Chapman, Abramson, Ma, Nikolich, etc) overcome these deficiencies in Chapman B, and for at least these reasons, Applicants submit that independent claim 1 distinguishes over the references of record and is in condition for allowance. Claims 2-6 and 12-14 depend from claim 1 and are distinguishable for at least the same reasons as claim 1, and further in view of the various features recited therein. Independent claim 39 recites features similar to those of claim 1 discussed above. Hence, for reasons similar to those given above for claim 1, Applicants submit that independent claim 39 distinguishes over the references of record and is in condition for allowance. Claims 41-45 depend from claim 39 and are distinguishable for at least the same reasons as claim 39, and further in view of the various features recited therein. Claim 46 has been cancelled, thus rendering this rejection moot. Independent claim 47 recites features similar to those of claim 1 discussed above. Hence, for reasons similar to those given above for claim 1, Applicants submit that independent claim 47 distinguishes over the references of record and is in condition for allowance. Claims 48-50, 52 depend from claim 47 and are distinguishable for at least the same reasons as claim 47, and further in view of the various features recited therein. Independent claim 53 recites features similar to those of claim 1 discussed above. Hence, for reasons similar to those given above for claim 1, Applicants submit that independent claim 53 distinguishes over the references of record and is in condition for allowance. Claims 54-56, 58 depend from claim 53 and are distinguishable for at least the same reasons as claim 53, and further in view of the various features recited therein.

Rejections under 35 U.S.C. § 103

Claims 15-16 are rejected under 35 U.S.C. 103(a) as being anticipated by Chapman, Nikolich (US Patent No. 6853680), hereinafter referred to as Nikolich, and further in view of Ma (US Publication No. 2005/0177861), hereinafter referred to as Ma. Claims 15-16 depend from claim 1 discussed above and are distinguishable for at least the same reasons as claim 1, and further in view of the various features recited therein.

Claim 17 is rejected under 35 U.S.C. 103(a) as being anticipated by Chapman and further in view of Chapman B (US Patent No. 7,349,430), hereinafter referred to as Chapman B. Dependent claim 17 has been cancelled, thus rendering this rejection moot.

Claims 7-11 and 18-23 are rejected under 35 U.S.C. 103(a) as being anticipated by Chapman and further in view of Abramson (US Publication No. 2003/0120819), hereinafter referred to as Abramson. Claims 7-11 depend from claim 1 discussed above and are distinguishable for at least the same reasons as claim 1, and further in view of the various features recited therein.

Claim 40 is rejected under 35 U.S.C. 103(a) as being anticipated by Chapman and further in view of Bunn (US Publication No. 2008/0010300), hereinafter referred to as Bunn. Claim 40 is rejected under 35 U.S.C. 103(a) as being anticipated by Chapman and further in view of Rakib (US Publication No. 2002/0019984), hereinafter referred to as Rakib. Claim 40 depends from claim 39 discussed above and is distinguishable for at least the same reasons as claim 39, and further in view of the various features recited therein.

Claims 61 and 62 are rejected under 35 U.S.C. 103(a) as being anticipated by Chapman and further in view of Wiget (US Publication No. 2004/0030804), hereinafter referred to as Wiget. Independent claims 61-62 recite features similar to those of claim 1 discussed above. Hence, for reasons similar to those given above for claim 1, Applicants submit that independent claims 61-62 distinguish over the references of record and are in condition for allowance.

All objections and rejections have been addressed. Hence, it is respectfully submitted that the present application is in condition for allowance, and a notice to that effect is earnestly solicited.

Respectfully submitted,

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By Surendra K. Ravula
Surendra K. Ravula
Registration No. 65,588
10 S. Wacker Dr., Suite 3000
Chicago, IL 60606
Tel: (312) 463-5000
Fax: (312) 463-5001